

Amendments to the Claims:

Please replace the heading before claim 1 with the following new heading:

~~CLAIMS~~ What is claimed is:

Please replace claims 1 to 10 as presented in the underlying PCT/EP2005/002372 with the following claims. The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claims 1 to 10 (canceled).

Claim 11 (new): A method for determining a position of an object moving along a known course comprising steps of:

- determining an absolute position of the object with a first confidence interval;
- determining a relative position of the object with a second confidence interval;
- determining a smaller confidence interval of the first and second confidence intervals;

and

- determining the position of the object using the absolute or relative position corresponding to the smaller confidence interval.

Claim 12 (new): The method as recited in claim 11 wherein the object is a vehicle.

Claim 13 (new): The method as recited in claim 12 wherein the vehicle is a train.

Claim 14 (new): The method as recited in claim 11 wherein the step of determining the absolute position includes a railway-safe positioning method involving a digital mapping of possible trajectories and at least one satellite communication receiver.

Claim 15 (new): The method as recited in claim 14 wherein the at least one satellite communication receiver is a GNSS receiver.

Claim 16 (new): The method as recited in claim 11 wherein the step of determining a relative position includes detecting the presence of a beacon and integrating a speed of the object with reference to a location of the beacon.

Claim 17 (new): The method as recited in claim 16 wherein the speed is calculated via a GNSS Doppler signal.

Claim 18 (new): The method as recited in claim 11 wherein the first and second confidence intervals determine the position of the object with an error probability in the order of 10^{-9} .

Claim 19 (new): The method as recited in claim 18 wherein the error probability is in the order of 10^{-12} .

Claim 20 (new): The method as recited in claim 11 wherein the first confidence interval for the absolute position is in the order of 50 m.

Claim 21 (new): A location device for determining a position of an object moving along a known course comprising:

- an absolute position determining system yielding a first confidence interval and having access to a digital mapping of possible trajectories and at least one satellite communication receiver; and

- a relative position determining system yielding a second confidence interval and detecting a presence of beacons placed along the course.

Claim 22 (new): The location device as recited in claim 21 wherein the object is a vehicle.

Claim 23 (new): The location device as recited in claim 22 wherein the object is a train.

Claim 24 (new): The location device as recited in claim 21 wherein the satellite communication receiver is a GNSS receiver.

Claim 25 (new): The location device as recited in claim 21 wherein the absolute position device includes means to access the digital mapping of possible trajectories.

Claim 26 (new): The location device as recited in claim 21 wherein the relative position determining system includes means to detect the presence of beacons placed along the course.

Claim 27 (new): A location device for determining a position of an object moving along a known course comprising:

- an absolute position determining system yielding a first confidence interval and having access to a digital mapping of possible trajectories and at least one satellite communication receiver;

- a relative position determining system yielding a second confidence interval and detecting a presence of beacons placed along the course; and

- means for selecting a smaller confidence interval among the first and second confidence intervals,

- the position of the object determined according to the method as recited in claim 11.

Claim 28 (new): The location device as recited in claim 27 wherein the satellite communication receiver is a GNSS receiver.

Claim 29 (new): The location device as recited in claim 27 wherein the absolute position device includes means to access the digital mapping of possible trajectories.

Claim 30 (new): The location device as recited in claim 27 wherein the relative position determining system includes means to detect the presence of beacons placed along the course.